

IALA COUNCIL
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11 – IALA TECHNICAL ACTIVITIES

11.4 – ENAV

IALA Seminar on Maritime Digital Infrastructure and Testbeds

Note by the Secretariat

1. INTRODUCTION

A seminar on the subject of Maritime Digital Infrastructure and Testbeds was hosted by the International Association of Marine Aids to Navigation and Lighthouse Authorities (IALA) in association with the Swedish Maritime Administration (SMA), Viktoria Swedish ITC, the Danish Maritime Authority and the Korea Research Institute of Ships and Ocean Engineering (KRISO) at the Lindholmen Science Park Conference Centre in Gothenburg, Sweden, from 30 November to 3 December 2015.

The workshop was attended by 44 delegates, representing 12 countries.

2. AIMS OF THE WORKSHOP

The aims of the workshop were:

- Discuss the development and deployment of maritime digital infrastructures and related testbeds, with the aim of forming a basis for a future introduction of e-navigation services and solutions.
- Exchange views on developments on digital infrastructure and data and information sharing.
- Facilitate discussion amongst a wide range of professionals within the maritime domain as well as from other sectors.
- Provide IALA with proposals, concepts and examples for further discussion to formulate guidance on the development and deployment of a maritime digital infrastructure.
- An associated goal was to identify steps to establish a framework for a maritime digital infrastructure and the sharing of data and information.

Utilising the expertise of participating IALA Members and experts in digital infrastructures and testbeds in related domains, the seminar considered digital infrastructures for e-navigation, identities & security in e-navigation communications, description, registration, management of services and governance of e-navigation services and e-navigation testbeds. The seminar provided outcomes for consideration by the ENAV Committee at its 18th session.

3. PROCESS

A series of 20 presentations were given under five broad headings. Presentation sessions were interleaved with working group discussion sessions. It was considered that this format of seminar provides an effective knowledge sharing environment and facilitated discussion amongst a wide range of professionals within the maritime domain as well as from other sectors.

4. KEY OUTCOMES FROM THE WORKSHOP INCLUDE:

1. The seminar explored the development and deployment of maritime digital infrastructures (MDI) and related testbeds, with the aim of forming a basis for a future introduction of e-



navigation services and solutions. It also considered methods to establish a framework for a maritime digital infrastructure and the sharing of data and information.

2. The seminar found that sound business cases with clear tangible benefits are critical for the adoption of e-navigation services.
3. It was proposed that IALA should consider establishing a collaboration forum across the maritime domain including other IGO, NGO and industry bodies to ensure the harmonised implementation of e-navigation.
4. The need for unique universal identifiers and addressing cyber security issues was identified.

5. CONCLUSIONS OF THE SEMINAR

The following nine conclusions were derived at the seminar.

1. Adoption of e-navigation and the use of maritime digital infrastructure is dependent on sound business cases with clear tangible benefits.
2. IALA should consider establishing a collaboration forum across the maritime domain including other IGOs, NGOs and industry to ensure the harmonised implementation of e-navigation.
3. There is merit in local and regional implementation as a means to obtain global acceptance of e-navigation solutions.
4. A coordinated, decentralised approach could be used for information sharing and service interaction between different domains. A federated approach to achieve this was considered at the seminar.
5. The Maritime Architecture Framework methodology can be useful for visualising different perspectives and their interrelationships in the maritime domain and e-navigation.
6. There is a compelling need for universal identification of actors and information objects, etc to enable interoperability to exchange information.
7. Cyber security issues need to be addressed in the maritime digital infrastructure.
8. The IALA ENAV Committee could consider applying the hypothesis-driven validation methodology when assessing testbed results.
9. Increased visibility of the themes which are being addressed in testbeds and establishment of special interest groups may enhance collaboration across testbeds.

6. THE COUNCIL IS REQUESTED TO

The Council is requested to note the outcome of the seminar and consider the conclusions in relation to the work of IALA.